

WHAT IS CLAIMED IS:

1. A glazing element useful for silicone structural glazing (hereinafter, stopless glazing) comprising a transparent laminate in a support structure, wherein the laminate comprises at least one attachment means for attaching the laminate to the support structure wherein: (1) the laminate comprises at least one layer of glass bonded directly to a thermoplastic polymer interlayer on at least one surface of the glass; (2) the interlayer extends beyond at least one edge of the laminate; (3) one surface of the extended portion of the interlayer is bonded to at least one surface of the attachment means; (4) another surface of the extended portion of the interlayer is bonded to the glass; (5) the attachment means is a clip useful for aligning and holding the laminate inside of a retaining channel of the support structure; (6) the clip optionally comprises at least one interlocking extension useful for restricting rotational and/or transverse movement of the laminate within the channel and/or movement of the laminate out of the channel, and wherein the glazing does not require an external pressure plate for mounting to the support structure.

2. The glazing element of Claim 1 wherein the clip comprises at least one extension.

3. The glazing element of Claim 2 wherein the clip comprises at least two extensions.

4. The glazing element of Claim 3 wherein the support structure comprises cables, ropes, chains, hooks, or a combination of any of these.

5. The glazing element of Claim 1 wherein the thermoplastic polymer is selected from polymers in the group consisting of: polyvinylbutyrals (PVB); polyvinyl chlorides (PVC); polyurethanes (PUR); polyvinyl

acetate; ethylene acid copolymers and derivatives thereof; polyesters; copolyesters; polyacetals and blends thereof.

6. The glazing element of Claim 5 wherein the
5 thermoplastic polymer is an ethylene acid copolymer or a fully or partially neutralized salt thereof (ionomer).

7. The glazing element of Claim 6 wherein the thermoplastic polymer is an ionomer.

10 8. A glass laminate suitable for use in a stopless glazing application comprising: at least two layers of glass having at least one thermoplastic polymer interlayer positioned between the glass layers; at least one attachment means positioned at one or more
15 points on the periphery of the laminate, wherein the attachment means comprises a retaining assembly that is bonded directly to a second thermoplastic polymer, and wherein the second thermoplastic polymer is (a) bonded to the interlayer at the interface where the polymer
20 and the interlayer are in direct contact and (b) bonded to the glass at another interface where the glass and the polymer are in direct contact, and wherein the second thermoplastic polymer can be the same material as the thermoplastic polymer interlayer or can be a
25 different material from the thermoplastic polymer interlayer.

9. The laminate of Claim 8 wherein the retaining assembly is a corner assembly bonded to the laminate on at least one of its vertices.

30 10. The laminate of Claim 9 wherein the interlayer is selected from polymers in the group consisting of: polyvinylbutyrals (PVB); polyvinyl chlorides (PVC); polyurethanes (PUR); polyvinyl acetate; ethylene acid copolymers and derivatives
35 thereof; polyesters; copolyesters; polyacetals, and blends thereof.

11. The laminate of Claim 10 wherein the interlayer is an ethylene acid copolymer or an ionomer thereof.

12. The laminate of Claim 8 wherein the second
5 polymer is a polymer selected from the group consisting of: PVB; PVC; PUR; polyvinyl acetate; ethylene acid copolymers and derivatives thereof; polyesters; copolyesters; polyacetals, and blends thereof.

13. The laminate of Claim 12 wherein the second
10 polymer is an ethylene acid copolymer or an ionomer thereof.

14. A glass laminate comprising a transparent laminate and at least one attachment means for attaching the laminate to a support structure wherein:
15 (1) the laminate comprises at least one layer of glass bonded directly to a thermoplastic polymer interlayer on at least one surface of the glass; (2) the interlayer extends beyond at least one edge of the laminate; (3) one surface of the extended portion of
20 the interlayer is bonded to at least one surface of the attachment means; (4) another surface of the extended portion of the interlayer is bonded to the glass; (5) the attachment means is at least one retaining assembly positioned at one or more of the vertices of the
25 laminate, wherein the at least one retaining assembly is bonded directly to a second thermoplastic polymer, and wherein the second thermoplastic polymer is in turn bonded to the thermoplastic polymer interlayer of the laminate at one interface and bonded to the glass at
30 another interface, and wherein the second thermoplastic polymer can be the same material as the thermoplastic polymer interlayer or can be a different material from the first thermoplastic polymer interlayer.

15. The laminate of Claim 14 the wherein the
35 retaining assembly comprises a posterior part and an anterior part.

16. The laminate of Claim 15 wherein the laminate comprises at least two retaining assemblies at its vertices.

17. The laminate of Claim 16 wherein the
5 thermoplastic polymer is selected from polymers in the group consisting of: polyvinylbutyrals (PVB); polyvinyl chlorides (PVC); polyurethanes (PUR); polyvinyl acetate; ethylene acid copolymers and derivatives thereof; polyesters; copolyesters; polyacetals and
10 blends thereof.

18. The laminate of Claim 17 wherein the thermoplastic polymer is an ethylene acid copolymer or a fully or partially neutralized salt thereof (ionomer).

15 19. The laminate of Claim 18 wherein the thermoplastic polymer is an ionomer.

20 20. The laminate of Claim 14 wherein the second polymer is a polymer selected from the group consisting of: PVB; PVC; PUR; polyvinyl acetate; ethylene acid copolymers and derivatives thereof; polyesters; copolyesters; polyacetals, and blends thereof.

21. The laminate of Claim 20 wherein the second polymer is an ethylene acid copolymer or an ionomer thereof.

25 22. The laminate of Claim 14 wherein the interlayer and the second polymer are the same polymeric materials.

23. The laminate of Claim 14 wherein the retaining assembly does not comprise a posterior part.

30 24. A glass laminate suitable for use in a stopless glazing architectural design comprising a transparent laminate and at least one attachment means for attaching the laminate to a support structure for the laminate wherein: (1) the laminate comprises at
35 least one layer of glass bonded directly to a thermoplastic polymer interlayer on at least one

surface of the glass; (2) the interlayer extends beyond at least one edge of the laminate; (3) one surface of the extended portion of the interlayer is bonded to at least one surface of the attachment means; (4) another
5 surface of the extended portion of the interlayer is bonded to the glass; (5) (a) the attachment means is a clip useful for aligning and holding the laminate in a retaining channel of the support structure and, (b) the clip further comprises at least one interlocking
10 extension useful for restricting rotational and/or transverse movement of the laminate within the retaining channel and/or movement of the laminate out of the channel.

25. The laminate of Claim 24 wherein the
15 thermoplastic polymer is selected from polymers in the group consisting of: polyvinylbutyrals (PVB); polyvinyl chlorides (PVC); polyurethanes (PUR); polyvinyl acetate; ethylene acid copolymers and derivatives thereof; polyesters; copolyesters; polyacetals and
20 blends thereof.

26. The laminate of Claim 25 wherein the thermoplastic polymer is an ethylene acid copolymer or a fully or partially neutralized salt thereof (ionomer).

25 27. The laminate of Claim 26 wherein the thermoplastic polymer is an ionomer.

28. A curtain wall comprising at least one laminate of Claim 24.

29. A process for attaching the interlayer of a
30 glass laminate to an attachment means post-lamination comprising the steps: contacting the edge of the laminate with a suitable bonding material for bonding the interlayer to the attachment means; contacting the attachment means to another surface of the bonding
35 material such that the interlayer is indirectly contacting the attachment means, forming a pre-bonded

retaining assembly; applying heat or energy to the pre-bonded assembly sufficient to cause the bonding material and the interlayer to flow together; discontinuing the application of heat and holding the
5 assembly together with pressure until the interlayer and bonding material have each cooled below their softening point.

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